

WHAT IS CLAIMED IS:

1. A polypeptide, comprising a component selected from the group consisting of:
  - (i) a polypeptide epitope having the sequence as disclosed in TABLE 1B;
  - (ii) an epitope cluster comprising the polypeptide of (i);
  - (iii) a polypeptide having substantial similarity to (i) or (ii);
  - (iv) a polypeptide having functional similarity to any of (i) through (iii); and
  - (v) a nucleic acid encoding the polypeptide of any of (i) through (iv).
2. The polypeptide of claim 1, wherein the polypeptide is immunologically active.
3. The polypeptide of claim 1, wherein the polypeptide is less than about 30 amino acids in length.
4. The polypeptide of claim 1, wherein the polypeptide is 8 to 10 amino acids in length.
5. The polypeptide of claim 1, wherein the substantial or functional similarity comprises addition of at least one amino acid.
6. The polypeptide of claim 5, wherein the at least one additional amino acid is at an N-terminus of the polypeptide.
7. The polypeptide of claim 1, wherein the substantial or functional similarity comprises a substitution of at least one amino acid.
8. The polypeptide of claim 1, the polypeptide having affinity to an HLA-A2 molecule.
9. The polypeptide of claim 8, wherein the affinity is determined by an assay of binding.
10. The polypeptide of claim 8, wherein the affinity is determined by an assay of restriction of epitope recognition.
11. The polypeptide of claim 8, wherein the affinity is determined by a prediction algorithm.
12. The polypeptide of claim 1, the polypeptide having affinity to an HLA-B7 or HLA-B51 molecule.
13. The polypeptide of claim 1, wherein the polypeptide is a housekeeping epitope.
14. The polypeptide of claim 1, wherein the polypeptide corresponds to an epitope displayed on a tumor cell.
15. The polypeptide of claim 1, wherein the polypeptide corresponds to an epitope displayed on a neovasculature cell.
16. The polypeptide of claim 1, wherein the polypeptide is an immune epitope.
17. The polypeptide of claim 1, wherein the polypeptide is encoded by a nucleic acid.

18. A composition comprising the polypeptide of claim 1 and a pharmaceutically acceptable adjuvant, carrier, diluent, or excipient.
19. The composition of claim 18, where the adjuvant is a polynucleotide.
20. The composition of claim 19 wherein the polynucleotide comprises a CpG dinucleotide.
21. The composition of claim 18, wherein the adjuvant is encoded by a polynucleotide.
22. The composition of claim 18 wherein the adjuvant is a cytokine.
23. The composition of claim 23 wherein the cytokine is GM-CSF.
24. The composition of claim 18 further comprising a professional antigen-presenting cell (pAPC).
25. The composition of claim 18, further comprising a second epitope.
26. The composition of claim 25, wherein the second epitope is a polypeptide.
27. The composition of claim 25, wherein the second epitope is a nucleic acid.
28. The composition of claim 25, wherein the second epitope is a housekeeping epitope.
29. The composition of claim 25, wherein the second epitope is an immune epitope.
30. A recombinant construct comprising the nucleic acid of Claim 1.
31. The construct of claim 30, further comprising a plasmid, a viral vector, a bacterial vector, or an artificial chromosome.
32. The construct of claim 30, further comprising a sequence encoding at least one feature selected from the group consisting of a second epitope, an IRES, an ISS, an NIS, and ubiquitin.
33. A composition comprising at least one component selected from the group consisting of the epitope of claim 1; a composition comprising the polypeptide or nucleic acid of Claim 1; a composition comprising an isolated T cell expressing a T cell receptor specific for an MHC-peptide complex, the complex comprising the polypeptide of claim 1; a recombinant construct comprising the nucleic acid of Claim 1; an isolated T cell expressing a T cell receptor specific for an MHC-peptide complex, the complex comprising the polypeptide of claim 1; a host cell expressing a recombinant construct comprising a nucleic acid encoding a T cell receptor binding domain specific for an MHC-peptide complex and a composition comprising the same, and a host cell expressing a recombinant construct comprising the nucleic acid of claim 1 and a composition comprising the same; with a pharmaceutically acceptable adjuvant, carrier, diluent, or excipient.
34. A method of treating an animal, comprising:  
administering to an animal the composition of claim 33.

35. The method of claim 34, wherein the administering step comprises a mode of delivery selected from the group consisting of transdermal, intranodal, perinodal, oral, intravenous, intradermal, intramuscular, intraperitoneal, mucosal, aerosol inhalation, and instillation.

36. The method of claim 34, further comprising a step of assaying to determine a characteristic indicative of a state of a target cell or target cells.

37. The method of claim 36, comprising a first assaying step and a second assaying step, wherein the first assaying step precedes the administering step, and wherein the second assaying step follows the administering step.

38. The method of claim 37, further comprising a step of comparing the characteristic determined in the first assaying step with the characteristic determined in the second assaying step to obtain a result.

39. The method of claim 38, wherein the result is selected from the group consisting of: evidence of an immune response, a diminution in number of target cells, a loss of mass or size of a tumor comprising target cells, a decrease in number or concentration of an intracellular parasite infecting target cells.

40. A method of making a vaccine, comprising:

combining at least one component selected from the group consisting of the polypeptide of claim 1; a composition comprising the polypeptide or nucleic acid of Claim 1; a composition comprising an isolated T cell expressing a T cell receptor specific for an MHC-peptide complex, the complex comprising the polypeptide of claim 1; a composition comprising a host cell expressing a recombinant construct, the construct comprising the nucleic acid of claim 1, or the construct encoding a protein molecule comprising the binding domain of a T cell receptor specific for an MHC-peptide complex; a recombinant construct comprising the nucleic acid of Claim 1; an isolated T cell expressing a T cell receptor specific for an MHC-peptide complex, the complex comprising the polypeptide of claim 1; and a host cell expressing a recombinant construct, the construct comprising the nucleic acid of claim 1, or the construct encoding a protein molecule comprising the binding domain of a T cell receptor specific for an MHC-peptide complex; with a pharmaceutically acceptable adjuvant, carrier, diluent, or excipient.